LO.a: Describe the basic features of a fixed-income security.

1. Which of the following statements is the *most accurate* description of non-sovereign and quasi-government bonds?
   A. Non-sovereign bonds are issued by agencies that are owned or sponsored by governments. Quasi-government bonds are issued by local government authorities.
   B. Non-sovereign bonds are issued by companies. Quasi-government bonds are issued by supranational organizations.
   C. Non-sovereign bonds are issued by local government authorities. Quasi-government bonds are issued by agencies that are owned or sponsored by governments.

2. Red-star Inc. issued bonds 2.5 years ago with an original maturity of 3 years. Voltas Inc. issued bonds 3 months ago with an original maturity of 9 months. Currently, both these bonds have a remaining tenure of 6 months. The bonds would *most likely* be classified as:
   A. money market securities.
   B. Red-star's bonds are capital market securities and Volta's bonds are money market securities.
   C. capital market securities.

3. Which of the following statements are *most likely* to be correct about coupon payment structures?
   Statement I: Floating rate notes are affected more when interest rates increase and as a result have greater interest rate risk.
   Statement II: Bonds with step-up coupons offer bondholders some protection against rising interest rates.
   Statement III: A credit-linked coupon bond has a coupon that changes with the bond's credit rating while a payment-in-kind coupon bond allows the issuer to pay interest in the form of additional amounts of bond issue rather than cash payment.
   A. Statement I and II.
   B. Statement I and III.
   C. Statement II and III.

4. A bond with a par value of $10,000 is currently quoted at 102. What is the current market price of the bond? Is it trading at a discount or a premium to its par value?
   A. Current market price is $10,020 and the bond is trading at a premium.
   B. Current market price is $9,800 and the bond is trading at a discount.
   C. Current market price is $10,200 and the bond is trading at a premium.

5. An organization issued bonds of par value $1,000 and a coupon rate of 5%. The coupons are paid quarterly. The periodic interest payment is:
   A. $50, paid once a year.
   B. $25, paid twice a year.
   C. $12.5, paid four times in a year.

6. Which of the following is *most likely* an example of a sovereign bond? A bond issued by:
   A. the U.S government.

B. the State of Minnesota.
C. the International Monetary Fund.

7. Andrew Corp. issues a bond to Brad Corp. worth $100,000. Interest rate payments schedule and rate have been agreed upon. However, due to Andrew's financial instability, it may fail to make timely interest payments. The risk of loss to Brad resulting from this is *best* known as:
   A. credit risk.
   B. interest rate risk.
   C. reinvestment risk.

8. A capital market security *most likely* matures in:
   A. one year or less.
   B. between six to eighteen months.
   C. more than one year.

9. A bond is trading at a premium, if the bond's price is:
   A. lower than par value.
   B. same as par value.
   C. higher than par value.

10. A bond has a par value of $1,000 and a coupon rate of 10%. Coupon payments are made semi-annually. The periodic interest payment is:
    A. $50, paid twice a year.
    B. $50, paid once a year.
    C. $100, paid once a year.

11. The type of bond that makes coupon payment in one currency and pays par value at maturity in another currency is a:
    A. currency option bond.
    B. pure discount bond.
    C. dual-currency bond.

12. Carla owns a floating rate note. Interest payments for the note are to be made on a semiannual basis with the second payment due in December 2013. The agreed upon coupon rate is six-month LIBOR + 30 bps. The table below shows the six-month LIBOR rates for the year 2013:

Date	**Six-month LIBOR**
January 1, 2013	5.0%
June 30, 2013	5.5%
December 31, 2013	6.0%

    Which of the following is *most likely* to be the applicable interest rate for the second payment?
    A. 5.30%.
    B. 5.80%.
    C. 6.30%.

13. The coupon rate of a floating- rate note is six-month Libor + 50 bps. It makes payments in June and December. The six-month Libor was 4.00% at the end of June 2014 and 4.50% at the end of December 2014. The interest rate used to calculate the payment due in December 2014 is:
    A. 4.50%.
    B. 5.00%.
    C. 4.00%.

LO.b: Describe content of a bond indenture.

14. Assets underlying the debt obligation above and beyond the issuer's promise to pay are:
    A. collaterals.
    B. credit enhancements.
    C. covenants.

15. The term *least likely* used to refer to the legal contract under which a bond is issued is:
    A. indenture.
    B. trust deed.
    C. letter of credit.

16. The type of collateral used to secure equipment trust bonds is *most likely*:
    A. securities.
    B. mortgages.
    C. physical assets.

17. Which of the following is *most likely* to be an example of an internal credit enhancement?
    A. Excess spread.
    B. Letter of credit.
    C. Surety bond.

18. Which of the following is *least likely* an internal credit enhancement?
    A. Overcollateralization.
    B. Excess spread.
    C. Cash collateral account.

19. Which of the following is *least likely* an external credit enhancement?
    A. Subordination.
    B. Letter of credit.
    C. Cash collateral account.

LO.c: Compare affirmative and negative covenants and identify examples of each.

20. Which of the following statements is the *most accurate* description of affirmative and negative covenants?

A. Affirmative covenants refer to the actions the borrower is required to perform. Negative covenants are restrictions on the borrower.
B. Affirmative covenants refer to restrictions on the borrower. Negative covenants refer to the actions the borrower is required to perform.
C. Affirmative covenants are actions the lender is required to perform. Negative covenants are actions the borrower is required to perform.

21. Fendi is required to pay taxes as they become due and also maintain his current line of business. These two are examples of:
A. affirmative covenants only.
B. negative covenants only.
C. affirmative and negative covenants only.

22. A covenant in a company's bond indenture states that the dividends will not exceed 10% of earnings. This is *most likely* a(n):
A. negative covenant.
B. affirmative covenant.
C. neutral covenant.

23. A covenant in a company's bond indenture states that the company will comply with all laws and regulations. This is *most likely* a(n):
A. negative covenant.
B. affirmative covenant.
C. neutral covenant.

24. Which of the following is *least likely* to be an example of an affirmative covenant?
A. Taxes will be paid on time.
B. The debt-to-equity ratio will not exceed 0.5.
C. Assets will be maintained.

25. Analyst 1: Affirmative covenants typically impose additional costs to the issuer and materially constrain the issuer's potential business decisions.
Analyst 2: Negative covenants typically impose additional costs to the issuer and materially constrain the issuer's potential business decisions.
Which analyst's statement is *most likely* correct?
A. Analyst 1.
B. Analyst 2.
C. Neither.

LO.d: Describe how legal, regulatory, and tax considerations affect the issuance and trading of fixed-income securities.

26. An example of a domestic bond is a bond issued by:
A. Honda from Japan, denominated in Canadian dollars, and sold in Canada.
B. the TATA group from India, denominated in Indian Rupee and sold in India.

C. Wal-Mart from China, denominated in Chinese Yuan, and sold in various countries in Europe, the Middle East, and Asia Pacific.

27. Tata Motors, an Indian company, issues a bond in United Kingdom denominated in United Kingdom pounds. This is *most likely* to be an example of:
    A. a Eurobond.
    B. a foreign bond.
    C. a domestic bond.

28. A bond issued by Samsung from South Korea, denominated in U.S. dollars but not registered with the SEC, and sold to an institutional investor in Europe, is *most likely* an example of a(n):
    A. Eurobond.
    B. global bond.
    C. foreign bond.

29. Assuming that Poland has an original issue discount tax provision, an investor in Poland purchases a 20-year zero coupon bond at a deep discount to par value. Given that the investor shall hold the bond till maturity, he is *most likely* to report:
    A. taxable income from the bond every year until maturity.
    B. tax deduction in the year of purchase of bond.
    C. capital gain at the end of 20 years.

30. Analyst 1: Most Eurobonds are bearer bonds and ownership is recorded by name or serial number.
    Analyst 2: Most Eurobonds are registered bonds and the trustee does not keep records of who owns the bonds.
    Which analyst's statement is *most likely* correct?
    A. Analyst 1.
    B. Analyst 2.
    C. Neither.

31. Analyst 1: The major advantage of a SPV is bankruptcy remoteness.
    Analyst 2: The major advantage of a SPV is beneficial tax treatments.
    Which analyst's statement is *most likely* correct?
    A. Analyst 1.
    B. Analyst 2.
    C. Neither.

32. The source of payment for supranational bonds is *least likely* based on:
    A. Repayment of previous loans made by the organization.
    B. Taxing authority.
    C. Paid-in capital of the member states.

33. Daniel Davos aims to convince the finance division at his company to issue a bond through a special purpose vehicle. Which of the following advantages is he *most likely* to use as his line of argument?
    A. Bankruptcy remoteness.
    B. Greater liquidity.
    C. Lower issuing costs.

34. A company issued a 5-year zero-coupon bond with a par value of $100 and sold it for $80. Assuming an original discount tax provision, an investor who buys the zero-coupon bond at issuance and holds it until maturity *most likely*:
    A. has to include $4 in his taxable income every tax year for 5 years and has to declare a capital gain of $20 at maturity.
    B. has to include $4 in his taxable income every tax year for 5 years and does not have to declare a capital gain at maturity.
    C. does not have to include anything in his taxable income every tax year for 5 years but has to declare a capital gain of $20 at maturity.

35. A Baa2 rated corporation wishes to issue debt to finance its operations at the lowest possible cost. If it decides to sell a pool of receivables into a special purpose vehicle (SPV), its primary motivation is *least likely* to:
    A. Allow the corporation to retain a first lien on the assets of the SPV.
    B. Segregate the assets into a bankruptcy-remote entity for bondholders.
    C. The SPV can achieve a rating as high as Aaa and borrow at lower rates.

LO.e: Describe how cash flows of fixed-income securities are structured.

36. The structure that requires the smallest repayment of principal at maturity is that of a:
    A. fully amortized bond.
    B. bullet bond.
    C. partially amortized bond.

37. A company issued 10 year bonds with a notional principal of $10 million. The payment structure of the issue states that the company will start repaying the principal from fifth year onwards. Each year the company will pay $2 million. This is *most likely* a(n):
    A. balloon structure.
    B. amortizing loan.
    C. sinking fund provision.

38. Edward issues a bond which has a structure that shall result in the largest repayment of principal at maturity. Which of the following bonds is he *most likely* to have issued?
    A. fully amortized bond.
    B. partially amortized bond.
    C. plain vanilla bond.

39. WINZ Inc. issued bonds with a coupon rate of 5% and maturity of 30 years. The company will increase the coupon rate by 0.25% every 5 years. The bonds are *most likely*:

A. floating rate bonds.
B. step up coupon bonds.
C. deferred coupon bonds.

40. A bond pays no coupons for its first few years but then pays a higher coupon than it otherwise normally would for the remainder of its life. The bond is *least likely* a(n):
    A. credit linked coupon bond.
    B. split coupon bond.
    C. deferred coupon bonds.

41. Fully amortizing bonds with periodic payments adjusted for inflation are called:
    A. interest indexed bonds.
    B. indexed annuity bonds.
    C. capital indexed bonds.

42. A plain vanilla bond has a maturity of 5 years, a par value of $100, and a coupon rate of 7%. The principal repayment in the first year is *closest* to:
    A. $0.00.
    B. $7.00.
    C. $1.08.

43. Compared to a partially amortized bond, the interest amounts of an otherwise similar fully amortized bond are:
    A. lower or equal.
    B. equal.
    C. higher or equal.

44. Which of the following statements is *most accurate*?
    A. FRNs usually pay annual coupons.
    B. FRNs usually pay quarterly coupons.
    C. FRNs usually pay semi-annual coupons.

45. A zero-coupon bond can be classified as a:
    A. step-up bond.
    B. credit-linked bond.
    C. deferred coupon bond.

46. An investor wants protection against increases in market interest rate. Which of the following bonds is he *least likely* to buy?
    A. Step-up bonds.
    B. Floating rate notes.
    C. Inverse floating rate notes.

47. In case of capital indexed bonds linked to inflation, when deflation occurs:
    A. the principal amount remains unchanged but the coupon rate decreases.
    B. the coupon rate remains unchanged but the principal amount decreases.

C. the coupon payment remains unchanged but the principal amount decreases.

LO.f: Describe contingency provisions affecting the timing and/or nature of cash flows of fixed-income securities and identify whether such provisions benefit the borrower or the lender.

48. A company issued bonds with 9% coupon rate and a maturity of 10 years. These bonds give the issuer right to redeem all or part of the issued bonds after 5 years at a specific rate. The option described here is *most likely* a:
A. put option.
B. call option.
C. convertible option.

49. A company has issued bonds with 9% coupon rate and a maturity of 10 years. These bonds give the bondholder right to sell back all or part of the issued bonds in future at specific rate. The option described here is *most likely* a:
A. put option.
B. call option.
C. convertible option.

The following information is to be used for question 50 and 51.
XYZ Corporation issues a 30 year bond priced at 98.25 as a percentage of par on January 1, 2013. The bond is callable in whole or partially on every January 1 at the option of the issuer. The bond is first callable in 2023. Call prices have been provided in the table below:

Year	Price	Year	Price
2023	102.22	2027	101.55
2024	102.00	2028	101.32
2025	101.89	2029	100.56
2026	101.69	2030 onwards	100.00

Each bond has a par value of $1000.

50. Which of the follow statements is *most likely* correct?
Statement I: The call protection period is 10 years.
Statement II: The call provision is an American call.
A. Statement I.
B. Statement II.
C. Statement I and II.

51. Which of the following is *most likely* to be the call premium (per bond) in 2025?
A. $18.90.
B. $101.89.
C. $189.00.

52. The minimum value of a convertible bond is *most likely* the:
A. value of the bond without conversion option.

B. face value.
C. rate at which it can be converted to equity shares.

53. If a bond is callable at predetermined dates after the call protection period, it is *most likely* a(n):
    A. American style callable bond.
    B. European style callable bond.
    C. Bermuda Style callable bond.

54. A bond is issued with face value of $1,000, coupon rate of 7% and maturity of 10 years. The bond also has a call option to redeem the bonds at 103% any time after 3 years. What is the maximum value of this bond if the yield in market falls to 5% after 3 years?
    A. $1,300.
    B. $970.
    C. $1,030.

55. Which of the following statements is *least accurate?*
    A. A warrant is an embedded option.
    B. A call provision is an embedded option.
    C. A conversion provision is an embedded option.

56. Which of the following statements is *most accurate*?
    A. Putable bonds usually sell at a lower price than similar option free bonds.
    B. Callable bonds usually sell at a lower price than similar option free bonds.
    C. Convertible bonds usually sell at a lower price than similar option free bonds.

57. If a bondholder is concerned about additional reinvestment risk, then the bond is *most likely* a:
    A. convertible bond.
    B. putable bond.
    C. callable bond.

58. George is an issuer of a 10 year bond. Which of the following provisions is *most likely* to be a benefit to him?
    A. Call provision.
    B. Conversion provision.
    C. Put provision.

59. Which of the following is *least likely* to be the reason why a putable bond is beneficial to the bondholder?
    A. Cash can be reinvested at higher rates.
    B. Pre-specified selling price is helpful if interest rates rise.
    C. Provision of better credit quality against a decline in interest rates.

60. A warrant is *least likely* to be:
    A. an attached option.

B. an embedded option.
C. a yield enhancement.

61. The call provision of a callable bond:
A. limits the risk to bondholder.
B. limits the risk to issuer.
C. does not materially affect the risk of either the issuer or the bondholder.

62. The following information is provided for ECG Corporation's convertible bond:

Par value of bond	\$1,000
Current market price of bond	\$1,100
Conversion price	\$50

Which of the following is *most likely* to be the conversion ratio?
A. 20:1.
B. 22:1.
C. 2:1.

63. Assume that a convertible bond issued in Japan has a par value of 1,000 and is currently priced at 1,090. The underlying share price is 60 and the conversion ratio is 20:1. The conversion condition for this bond is:
A. parity.
B. above parity.
C. below parity.

64. Engro Corp recently issued a floating-rate note (FRN) that includes a feature that prevents its coupon rate from rising above a pre-specified maximum rate. This feature in an FRN is *most likely* referred to as a:
A. cap.
B. floor.
C. caplet.

65. Compared to a similar option-free bond, a convertible bond will typically:
A. trade at a lower price.
B. trade at the same price.
C. trade at a higher price.

Solutions

1. C is correct. Bonds issued by local government authorities are called non-sovereign bonds. Bonds issued by agencies that are owned or sponsored by governments are called quasi-government bonds. Additionally, bonds issued by supranational organizations are called supranational bonds. Bonds issued by national governments are called sovereign bonds. Bonds issued by companies are called corporate bonds.

2. B is correct. A bond with an original maturity of more than one year it is called capital market security. A bond with an original maturity of one year or less is called money market security.

3. C is correct. Statements II and III are correct. Statement I is incorrect because floating rate notes are less affected when interest rate changes and therefore have less interest rate risk.

4. C is correct. A bond quoted at 102 reflects a premium of 2% over its par value. This results in current market price of $10,200. Since the market price is greater than the par value, the bond is trading at a premium.

5. C is correct. Coupon rate of 5% paid quarterly means $\frac{5}{4}$ = 1.25% of par is paid every quarter. On a face value of $1,000, this results in a periodic interest payment of $12.5. This amount is paid every quarter i.e. four times a year.

6. A is correct. A sovereign bond is a bond issued by a national government, such as the U.S. government. A bond issued by a local government, such as the State of Minnesota, is a non-sovereign bond. A bond issued by the IMF is a supranational bond.

7. A is correct. Credit risk is the risk of loss resulting from the issuer failing to make full and timely payments of interest and/or repayments of principal.

8. C is correct. The primary difference between a money market security and a capital market security is the maturity at issuance. Money market securities mature in one year or less, whereas capital market securities mature in more than one year.

9. C is correct. If a bond's price is higher than its par value, the bond is trading at a premium.

10. A is correct. The annual coupon payment is $10\% * \$1000$ = $100. The coupon payments are paid semi-annually, so $50 is paid twice a year.

11. C is correct. A dual-currency bond makes coupon payments in one currency and pays the par value at maturity in another currency. A currency option bond gives the bondholders the right to choose the currency in which they want to receive each interest payment and principal repayment. A pure discount bond is issued at a discount to par value and redeemed at par.

12. B is correct. The applicable interest rate for the second payment due in December is the six month LIBOR at the end of June 2013 plus 30 bps. Therefore, 5.5% + 0.3% = 5.8%.

13. A is correct. The interest rate that should be used to calculate the payment due in December 2014 is the six-month Libor at the beginning of the period (i.e. the end of June 2014) plus 50 bps. Thus, it is 4.50% (4.00% + 0.50%)

14. A is correct. Collaterals are assets underlying the debt obligation above and beyond the issuer's promise to pay. Credit enhancements are provisions that may be used to reduce the credit risk of the bond issue. Covenants are clauses that specify the rights of bondholders and obligations of the issuer.

15. C is correct. A letter of credit is an external credit enhancement. A legal contract under which a bond is issued is called indenture or a trust deed.

16. C is correct. Equipment trust certificates are backed by physical assets. Mortgage backed securities are backed by mortgages. Collateral trust bonds are backed by securities.

17. A is correct. Excess spread is an example of an internal credit enhancement while letter of credit and surety bond are examples of external credit enhancement.

18. C is correct. A cash collateral account is an external credit enhancement that allows the issuer to immediately borrow the credit-enhancement amount and then invest it. Overcollateralization and excess spread are internal credit enhancements.

19. A is correct. Subordination is an internal credit enhancement, which refers to the ordering of claim priorities for ownership or interest in an asset. Letter of credit and cash collateral account are external credit enhancements.

20. A is correct. Affirmative covenants refer to the actions the borrower is required to perform and negative covenants are restrictions on the borrower.

21. A is correct. These are examples of positive or affirmative covenants.

22. A is correct. This covenant sets forth restrictions on the company's activities. Hence, it is a negative covenant.

23. B is correct. This covenant states actions that the borrower must take. Hence, it is an affirmative covenant.

24. B is correct. B is a negative covenant; it indicates what the issuer cannot do. A and C are incorrect because they are an example of an affirmative covenants which indicate what the issuer "must do" and are administrative in nature.

25. B is correct. Negative covenants typically impose additional costs to the issuer and materially constrain the issuer's potential business decisions.

26. B is correct. A domestic bond is issued by a local issuer, denominated in local currency, and sold in the domestic market. Option A is an example of foreign bond. Option C is an example of a Eurobond.

27. B is correct. Bonds issued by entities that are incorporated in that country are called domestic bonds, whereas bonds issued by entities that are incorporated in another country are called foreign bonds.

28. A is correct. A Eurobond is a bond that is issued internationally, outside the jurisdiction of any single country. Thus, a bond issued by Samsung from South Korea, denominated in U.S. dollars, but not registered with the SEC, is an example of a Eurobond. Global bonds are bonds that are issued simultaneously in the Eurobond market and in at least one domestic bond market. C is incorrect because if Samsung's bond issue were a foreign bond, it would be registered with the SEC.

29. A is correct. The original issue discount tax provision requires the investor to include a prorated portion of the original issue discount in his taxable income every year till maturity.

30. C is correct. Most Eurobonds are bearer bonds. The trustee does not keep records of who owns the bonds; only the clearing system knows who the bond owners are.

31. A is correct. An SPV is a bankruptcy-remote vehicle. If the sponsor defaults, no claims can be made to recover the assets that were transferred to the SPV.

32. B is correct. The source of payment for bonds issued by supranational organizations is either the repayment of previous loans made by the organization or the paid-in capital of its member states.

33. A is correct. A special purpose vehicle is a bankruptcy remote vehicle which is achieved by transferring the assets from the sponsor to the SPV. With the completion of the transfer, the sponsor does not have ownership rights. In case the sponsor defaults, no claims can be made to recover the assets that were transferred.

34. B is correct. The original issue discount tax provision requires the investor to include a prorated portion of the original issue discount in his taxable income every tax year until maturity. The original issue discount is the difference between the par value and the original issue price — that is, \$100 – \$80 = \$20. The bond's maturity is 5 years. Thus, the prorated portion that must be included each year is \$20/5 = \$4. The original issue discount tax provision allows the investor to increase his cost basis in the bond so that when the bond matures, the investor faces no capital gain or loss.

35. A is correct. The primary motivation of forming a special purpose vehicle (SPV) includes segregation of the assets into a bankruptcy-remote entity for bondholders and the SPV can achieve a rating as high as Aaa and borrow at lower rates.

36. A is correct. In a fully amortized the principal is repaid over time. In a partially amortized a part of the principal is repaid over time and a part is paid at maturity as a balloon payment. Due to the balloon payment the principal repaid is more than the fully amortized bond. In a bullet bond the entire principal is repaid at maturity.

37. C is correct. In sinking fund provision, the company pays back the principal in installments as per a predefined schedule over a period of time.

38. C is correct. A plain vanilla bond, also known as a bullet bond, has the largest repayment of principal. The principal is repaid with time for partially and fully paid amortized bonds.

39. B is correct. Step up coupon bond structure specifies an increase in the coupon rate at pre-defined period.

40. A is correct. A bond that pays no coupons for its first few years, but then pays a higher coupon than it otherwise normally would for the remainder of its life is called a deferred coupon bond or a split bond. A credit linked coupon bond has a coupon that changes when the bond's credit rating changes.

41. B is correct. Indexed annuity bonds are fully amortized bonds with periodic payments directly adjusted for inflation and deflation. In contrast, interest indexed and capital indexed bonds are non-amortizing.

42. A is correct. A plain vanilla (or bullet) bond does not make any principal repayment until the maturity date.

43. A is correct. Except at maturity, the principal repayments are higher for a fully amortized bond than for an otherwise similar partially amortized bond. Consequently, the principal amounts outstanding and, therefore, the amounts of interest payments are higher for a partially amortized bond than for a fully amortized bond, all else equal. The only exception is the first interest payment, which is the same for both repayment structures. This is because no principal repayment has been made by the time the first coupon is paid.

44. B is correct. Most FRNs pay interest quarterly and are tied to a three-month reference rate such as Libor.

45. C is correct. Because interest is effectively deferred until maturity, a zero-coupon bond can be thought of as a deferred coupon bond. Options A and B are incorrect because both step-up bonds and credit-linked bonds pay regular coupons. For a step-up bond, the coupon increases by specified margins at specified dates. For a credit- linked bond, the coupon changes when the bond's credit rating changes.

46. C is correct. The coupon rate on an inverse FRN has an inverse relationship to the reference rate. Thus, an inverse FRN does not offer protection to the investor when market interest rates increase. Options A and B are incorrect because step-up bonds and FRNs both offer some protection against increases in market interest rates.

47. B is correct. Following a deflation, the coupon rate of a capital- indexed bond remains unchanged, but the principal amount is adjusted downward for deflation. Thus, the coupon payment, which is equal to the fixed coupon rate multiplied by the inflation-adjusted principal amount, decreases.

48. B is correct. The option that gives the issuer right to redeem all or part of the issued bonds in future at a specific rate is called call option. And such bonds are called callable bonds.

49. A is correct. The option that gives the bondholder right to sell back all or part of the issued bonds in future at specific rate is put call option. And such bonds are called putable bonds.

50. A is correct. Call provision period = 2023 – 2013 = 10 years.
The call provision is a Bermuda call because it is on specific dates following the call protection period.

51. A is correct. Call premium = $(101.89\% * \$1000) - (\$1000)$ = \$18.9.

52. A is correct. The convertible bond has downside protection. Even if the price of shares go down the value of convertible bond will at least remain at par with the value of the bond without conversion

53. C is correct. An American style callable bond can be called any time after the call protection period. A European style callable bond can be called only once on the call date. A Bermuda style callable bond can be called on predetermined dates following the call protection period.

54. C is correct. A callable bond's maximum value is the call price. In this case the call price is 103% of \$1,000 which is \$1,030.

55. A is correct. A warrant is a separate, tradable security that entitles the holder to buy the underlying common share of the issuing company. Options B and C are incorrect because the call provision and the conversion provision are embedded options

56. B is correct. The put provision and the conversion provision are options that benefit the investor. Thus, putable bonds and convertible bonds sell at higher prices and lower yields relative to otherwise similar bonds that lack those provisions. B is correct because the call provision is an option that benefits the issuer. Because of this, callable bonds sell at lower prices and higher yields relative to otherwise similar non-callable bonds.

57. C is correct. Reinvestment risk refers to the effect that lower interest rates have on available rates of return when reinvesting the cash flows received from an earlier investment. Because bonds are typically called following a decline in market interest rates, reinvestment risk is particularly relevant for the holder of a callable bond.

58. A is correct. A call provision is a benefit to the issuer as it gives the issuer the right to redeem all or part of the bond before the specified maturity date.

59. C is correct. This is an explanation as to why callable bonds are beneficial to the issuer.

60. B is correct. A warrant is not an embedded option but rather an attached option. Warrants are considered yield enhancements.

61. B is correct. A callable bond limits the risk to the issuer. If interest rates fall the issuer can call the bond and issue a new bond at lower interest rates.

62. A is correct. Conversion Ratio = $\frac{\text{Par Value}}{\text{Conversion Price}} = \frac{1000}{50}$ = 20.

63. B is correct. The conversion value of the bond is 60 * 20 = 1,200. The price of the convertible bond is 1,090. Thus, the conversion value of the bond is more than the bond's price, and this condition is referred to as above parity.

64. A is correct. An FRN with a cap on the coupon rate prevents the coupon rate from rising above a pre-specified minimum rate.

65. C is correct. The conversion feature is beneficial to bondholders, thus a convertible bond will typically trade at a higher price as compared to a similar option free bond.